

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on June 9, 2008 has been entered.

Claim Objections

Claim 24 is objected to because of the following informalities: said claim is dependent upon a withdrawn claim. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8, 18-19 and 21-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9, 16-17, and 19-21 of copending Application No. 10/542,763. Although the conflicting claims are not identical, they are not patentably distinct from each other because there are overlapping ranges between the physical and chemical properties claimed for precipitated silica in both applications; furthermore, both applications claim same structure for organosilanes used to modify silica. Moreover, they both claim the same intended use for the claimed precipitated silica such as in vulcanizable rubber.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 18-19, and 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,846,506 to Esch et al. in view of US Patent No. 5,935,543 to Boyer et al.

Regarding claims 1 and 30-31, Esch et al. disclose precipitated silica with the physiochemical properties such as BET surface area of 35 to 350 m²/g, CTAB surface area of 30 to 350 m²/g, BET/CTAB surface area ratio of 0.8 to 1.1, DBP value of 150 to 300 ml/100 g, Sears value of 6 to 20 (column 1, lines 42-67; column 2, lines 12-20, 30-41). The ratio of Sears value to BET, as calculated, is found to be between 0.0571 to 0.17 (6/35 and 20/350).

Esch et al. teach a composition having overlapping ranges of physiochemical properties as that claimed in the instant invention for the substantially similar composition. Even though the reference does not disclose an anticipatory example or range, which is sufficiently specific to anticipate the present claims, as noted above, the reference teaches overlapping ranges of physiochemical properties for the same composition with the present claims, and overlapping ranges have been held to establish *prima facie* obviousness. See MPEP § 2144.05. Therefore, it would have been obvious, at the time of the invention, to have selected the overlapping portion of the range because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP § 2144.05.

With reference to moisture level, it is noted that the Esch et al. disclose substantially similar precipitated silica with overlapping ranges in the disclosed physiochemical properties as that claimed in the instant invention for precipitated silica, which has substantially similar intended use. The prior art do not expressly disclose a moisture level; however, Esch et al. disclose a substantially similar process of making (column 2, lines 42-65) for the precipitated silica which has similar intended use such as

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in vulcanizable rubber mixture. Esch et al., further, disclose that said invention exhibits better properties such as higher modulus, lower $\tan \delta$ as a measure of tire rolling resistance, better abrasion resistance, better heat build-up performance and more (column 5, lines 46-54). Thus, a moisture level, within the claimed range, is expected from the disclosed precipitated silica.

As noted above, Esch et al. disclose a process of making said silica. Esch et al. do not expressly disclose the use of said silica as a battery separator, in a coating, paint or ink or a personal care product.

Boyer et al., also drawn to precipitated silica having similar physiochemical properties such as overlapping ranges of CTAB, 140 to 185 m^2/g , and DBP, 210 to 310 cm^3/g , expressly disclose that variations in the parameters and/or conditions during production result in variations in the types of precipitated silica produced (Abstract; column 1, lines 20-23; column 2, lines 12-15, 25-2). Additionally, Boyer et al. disclose the use of said silica in a battery separator (column 5).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Esch et al. in order to include the moisture level of 4-8% motivated by the fact that Boyer et al., also drawn to the same field of art, teach that different properties can be achieved by variations in parameters and/or conditions during production. It would, also, be obvious to combine Esch et al. with Boyer et al. to obtain the invention as claimed in claim 30 motivated by the fact that Boyer et al. disclose the use of silica which has substantially overlapping ranges of DBP and CTAB

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with the instant application in a battery separator. Nevertheless, it should be noted that it is well settled in the art to use silica in paints and paper products.

Regarding claim 2, Esch et al. disclose BET/CATB ratio of 0.8 to 1.1 (column 1, lines 45-55; column 2, lines 31-41).

Regarding claim 3, Esch et al. disclose Sears value of 6 to 20 (column 1, lines 45-55; column 2, lines 13-20).

Regarding claim 4, Esch et al. disclose CTAB surface area of 30 to 350 m²/g (column 1, lines 45-55). Moreover, Boyer et al. disclose CTAB surface area of 160 to 185 (column 2, lines 25-27, 31-41).

Regarding claim 5, Esch et al. disclose DBP value of 150 to 300 (column 1, lines 45-55). In addition, Boyer et al. disclose DBP value of from 210 to 310 (column 1, lines 21-22).

Regarding claims 6-7, Esch et al. disclose BET surface area of 35 to 350 m²/g (column 1, lines 45-55; column 2, lines 13-20, 31-41).

Regarding claim 18, Esch et al. disclose the same structure for the organosilanes used to modify precipitated silica (column 2, lines 66-67; column 3, lines 1-31).

Regarding claim 19, Esch et al. disclose a similar organosilane compound, used to modify precipitated silica, based on formula (III), $R_n^1(RO)_{3-n}Si(Alkenyl)$, in which $n=3$ and R^1 : alkyl (column 3, lines 5-14). It is noted that based on the recitation of claim 19 of "... $SiR_{4-n}^2X_n$ (where $n=1, 2, 3, 4$)..." as one type of organosilanes, and considering $n=1$, X :alkenyl, and R^2 :alkyl, Esch et al. reads on the limitations of claim 19.

Regarding claims 23 and 25-26, Esch et al. disclose a vulcanizable rubber compounds comprising of disclosed precipitated silica having substantially overlapping ranges of the physiochemical properties as discussed in details above (column 1, lines 40-67; column 2, lines 13-20, 31-41; column 3, lines 42-45).

Esch et al. teach a substantially similar structure for the organosilanes used to modify precipitated silica as discussed in details above (column 2, lines 65-67; column 3, lines 1-31).

Regarding claim 24, Esch et al., as discussed in details above, disclose precipitated silica having substantially overlapping ranges of physiochemical properties as claimed in the instant invention.

Furthermore, claim 24 is a product-by-process claim. With reference to product-by-process claims, MPEP states:

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-

by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”

Regarding claim 27, Esch et al. disclose that modification with organosilanes may be performed in mixtures of 0.5 to 50 parts of organosilanes, related to 100 parts of precipitated silica, in particular 2-15 parts, related to 100 parts of precipitated silica, wherein the reaction between the precipitated silica and silane may be performed during compounding (in situ) or outside the compounding process (premodified).

Regarding claim 28, Esch et al., as discussed in details above, disclose vulcanizable rubber compounds which have the precipitated silica being incorporated into them (column 1, lines 40-67; column 2, lines 12-20, 31-41; column 3, lines 42-45; column 4, lines 30-33).

Regarding claim 29, Esch et al. disclose the claimed precipitated silica and its properties, as discussed in details above; furthermore, the prior art disclose incorporating/adding it into vulcanizable rubber compounds (column 1, lines 40-67; column 2, lines 12-20, 31-41; column 3, lines 42-45; column 4, lines 30-33).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Esch et al. in view of Boyer et al. as applied to claim 1 above and further in view of US Patent No. 6,180,076 to Uhrlandt et al.

Regarding claim 8, Esch et al. in view of Boyer et al. disclose precipitated silica having overlapping ranges of the physical and chemical properties as that claimed in the instant application.

Although the references as combined do not disclose a ratio of Sears value to the BET surface area of from 0.180 to 0.370, Uhrlandt et al., also drawn to precipitated silica, disclose BET surface area of between 120-300 m²/g and Sears index of between 6-25 ml which would result in a range of Sears value to BET ratio of from about 0.02 to 0.208 (Abstract; columns 1-2). Furthermore, Uhrlandt et al. disclose CTAB surface area of from 100-300, ratio of BET to CTAB of from 0.8-1.3, and DBP index of from 150-300.

Therefore, it would have been obvious to modify Esch et al. in view of Boyer et al. in order to obtain a ratio of Sears value to BET within the range 0.180 to 0.370 as taught by Uhrlandt et al. motivated by the fact that Uhrlandt et al. teach a substantially similar precipitated silica having substantially similar physical and chemical properties; furthermore, this combination is motivated by the fact that said silica (Uhrlandt et al.) can be dispersed significantly better in rubber mixtures (column 2, lines 34-65).

Claims 1-7, 18-19, are 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,846,506 to Esch et al. in view of US Patent Application Publication No. 2002/0022693 to Luginsland.

Regarding claim 1, Esch et al. teach precipitated silica with the physiochemical properties such as BET surface area of 35 to 350 m²/g, CTAB surface area of 30 to 350 m²/g, BET/CTAB surface area ratio of 0.8 to 1.1, DBP value of 150 to 300 ml/100 g, Sears value of 6 to 20 (column 1, lines 42-67; column 2, lines 12-20, 30-41). The ratio of Sears value to BET, as calculated, is found to be between 0.0571 to 0.17 (6/35 and 20/350).

Esch et al. teach a composition having overlapping ranges of physiochemical properties for the same composition with instant claims. Even though the reference does not disclose an anticipatory example or range which is sufficiently specific to anticipate the present claims, as noted above, the reference teaches overlapping ranges of physiochemical properties for the same composition with the present claims. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP § 2144.05. Therefore, it would have been obvious, at the time of the invention, to have selected the overlapping portion of the range because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP § 2144.05.

Esch et al. does not expressly disclose a moisture level of 4-8% for precipitated silica.

Luginsland, also drawn to the same field of art, disclose a surface-treated hydrophobic, precipitated silica, having BET surface area of from 50 to 500 m²/g and a DBP adsorption of from 200 to 350 g/100g, and a moisture content of from 2 to 6%, preferably from 2.5 to 3.5% ([0012]). Luginsland, in addition, disclose the use of said precipitated silica in rubber compositions ([0014]).

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Esch et al. in order to include the moisture level of precipitated silica as that taught by Luginsland motivated by the fact that Luginsland teaches that its invention provides an organosilicon mixture that has improved storage stability which is main factor in rubber technology ([0005], [0006], [0009]).

Regarding claim 2, Esch et al. disclose BET/CATB ratio of 0.8 to 1.1 (column 1, lines 45-55; column 2, lines 31-41).

Regarding claim 3, Esch et al. disclose Sears value of 6 to 20 (column 1, lines 45-55; column 2, lines 13-20).

Regarding claim 4, Esch et al. disclose CTAB surface area of 30 to 350 m²/g (column 1, lines 45-55).

Regarding claim 5, Esch et al. disclose DBP value of 150 to 300 (column 1, lines 45-55). Luginsland teaches precipitated silica having DBP value of preferably from 210 to 250 g/100 g ([0012]).

Regarding claims 6-7, Esch et al. disclose BET surface area of 35 to 350 m²/g (column 1, lines 45-55; column 2, lines 13-20, 31-41). Luginsland discloses BET surface area of from 50 to 200 m²/g, preferably from 80 to 120 m²/g ([0012]).

Regarding claim 18, Esch et al. disclose the same structure for the organosilanes used to modify precipitated silica (column 2, lines 66-67; column 3, lines 1-31).

Regarding claim 19, Esch et al. disclose a similar organosilane compound, used to modify precipitated silica, based on formula (III), $R_n^1(RO)_{3-n}Si(Alkenyl)$, in which $n=3$ and R^1 : alkyl (column 3, lines 5-14). It is noted that based on the recitation of claim 19 of "... $SiR_{4-n}^2X_n$ (where $n=1, 2, 3, 4$)..." as one type of organosilanes, and considering $n=1$, X :alkenyl, and R^2 :alkyl, Esch et al. reads on the limitations of claim 19.

Regarding claims 23 and 25-26, Esch et al. disclose a vulcanizable rubber compounds comprising of disclosed precipitated silica having substantially overlapping ranges of the physiochemical properties as discussed in details above (column 1, lines 40-67; column 2, lines 13-20, 31-41; column 3, lines 42-45).

Esch et al. teach a substantially similar structure for the organosilanes used to modify precipitated silica as discussed in details above (column 2, lines 65-67; column 3, lines 1-31).

Regarding claim 24, Esch et al., as discussed in details above, disclose precipitated silica having substantially overlapping ranges of physiochemical properties as claimed in the instant invention.

Furthermore, claim 24 is a product-by-process claim. With reference to product-by-process claims, MPEP states:

“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”

Regarding claim 27, Esch et al. disclose that modification with organosilanes may be performed in mixtures of 0.5 to 50 parts of organosilanes, related to 100 parts of precipitated silica, in particular 2-15 parts, related to 100 parts of precipitated silica, wherein the reaction between the precipitated silica and silane may be performed during compounding (in situ) or outside the compounding process (premodified).

Regarding claim 28, Esch et al., as discussed in details above, disclose vulcanizable rubber compounds which have the precipitated silica being incorporated into them (column 1, lines 40-67; column 2, lines 12-20, 31-41; column 3, lines 42-45; column 4, lines 30-33). In addition, Luginsland discloses the damping element, tire treads, conveyer belts, shoe soles and more being made from incorporating precipitated silica into them ([0018]).

Regarding claim 29, Esch et al. disclose the claimed precipitated silica and its properties, as discussed in details above; furthermore, the prior art disclose incorporating/adding it into vulcanizable rubber compounds (column 1, lines 40-67; column 2, lines 12-20, 31-41; column 3, lines 42-45; column 4, lines 30-33).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Esch et al. in view of Luginsland as applied to claim 1 above and further in view of Uhrlandt et al.

Regarding claim 8, Esch et al. in view of Luginsland disclose precipitated silica having overlapping ranges of the physical and chemical properties as that claimed in the instant application.

Although the references as combined do not disclose a ratio of Sears value to the BET surface area of from 0.180 to 0.370, Uhrlandt et al., also drawn to precipitated silica, disclose BET surface area of between 120-300 m²/g and Sears index of between 6-25 ml which would result in a range of Sears value to BET ratio of from about 0.02 to 0.208 (Abstract; columns 1-2). Furthermore, Uhrlandt et al. disclose CTAB surface area of from 100-300, ratio of BET to CTAB of from 0.8-1.3, and DBP index of from 150-300.

Therefore, it would have been obvious to modify Esch et al. in view of Luginsland in order to obtain a ratio of Sears value to BET within the range 0.180 to 0.370 as that taught by Uhrlandt et al. motivated by the fact that Uhrlandt et al. teach a substantially similar precipitated silica having substantially similar physical and chemical properties; furthermore, this combination is motivated by the fact that said silica (Uhrlandt et al.) can be dispersed significantly better in rubber mixtures (column 2, lines 34-65).

Claims 1-5, 7-8, 18-19, and 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,180,076 to Uhrlandt et al. in view of Boyer et al.

Regarding claims 1-5, 7-8, 18-19, 23-31, Uhrlandt et al. disclose precipitated silica with the physiochemical properties such as BET surface area of 120-300 m²/g, CTAB surface area of 100-300 m²/g, BET/CTAB surface area ratio of 0.8-1.3, DBP value of 150-300 ml/100 g, Sears value of 6-25 (Abstract, columns 1-2). The ratio of Sears value to BET, as calculated, is found to be between 0.02-0.208 (6/300 and 25/120).

Uhrlandt et al. teach a composition having overlapping ranges of physiochemical properties as that claimed in the instant invention for the substantially similar composition. Even though the reference does not disclose an anticipatory example or range, which is sufficiently specific to anticipate the present claims, as noted above, the reference teaches overlapping ranges of physiochemical properties for the same composition with the present claims, and overlapping ranges have been held to establish *prima facie* obviousness. See MPEP § 2144.05. Therefore, it would have been obvious, at the time of the invention, to have selected the overlapping portion of the range because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP § 2144.05.

Uhrlandt et al. disclose substantially similar structure for the organosilanes used to modify precipitated silica (column 3, lines 55-67 to column 3, lines 1-31). Moreover, Uhrlandt et al. disclose a similar organosilane compound, used to modify precipitated silica, based on formula (III), R_n¹(RO)_{3-n}Si(Alkenyl), in which n=3 and R¹: alkyl. It is

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noted that based on the recitation of claim 19 of "...SiR²_{4-n}X_n (where n=1, 2, 3, 4)..." as one type of organosilanes, and considering n=1, X:alkenyl, and R²:alkyl, Uhrlandt et al. reads on the limitations of claim 19. In addition, Uhrlandt et al. disclose a vulcanizable rubber compounds comprising of disclosed precipitated silica having substantially overlapping ranges of the physiochemical properties as discussed in details above. Further, Uhrlandt et al. teach a substantially similar structure for the organosilanes used to modify precipitated silica as discussed in details above. Furthermore, Uhrlandt et al. disclose the use of said silica as a battery separator, as filler for vulcanizable mixtures for the production of the tires, or etc. (Abstract; column 5, lines 28-33). Finally, Uhrlandt et al. disclose the from 0.5 to 50 parts of organosilanes based on 100 parts of silica, in particular 2 to 15 parts based on 100 parts of silica wherein the modification with silane may be carried out during the preparation of the mixture (in situ) or externally (premodification) (column 4, lines 23-31).

With reference to moisture level, it is noted that the Uhrlandt et al. disclose substantially similar precipitated silica with overlapping ranges in the disclosed physiochemical properties as that claimed in the instant invention for precipitated silica, which has substantially similar intended use. The prior art do not expressly disclose a moisture level; however, Uhrlandt et al. disclose a substantially similar process of making (columns 2-4) for the precipitated silica which has similar intended use such as in vulcanizable rubber mixture. Uhrlandt et al., further, disclose that said invention develops precipitated silica which can be dispersed significantly better in rubber

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mixtures (column 1, lines 34-37). Thus, a moisture level, within the claimed range, is expected from the disclosed precipitated silica.

Boyer et al., also drawn to precipitated silica having similar physiochemical properties such as overlapping ranges of CTAB, 140 to 185 m²/g, and DBP, 210 to 310 cm³/g, expressly disclose that variations in the parameters and/or conditions during production result in variations in the types of precipitated silica produced (Abstract; column 1, lines 20-23; column 2, lines 12-15, 25-2).

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Uhrlandt et al. in order to include a moisture level within the range of 4-8% motivated by the fact that Boyer et al., also drawn to the same field of art, teach that different properties can be achieved by variations in parameters and/or conditions during production.

Response to Arguments

Applicants' arguments filed June 9, 2008 have been fully considered but they are not persuasive.

The Declaration under 37 CFR 1.132 filed June 9, 2008 is insufficient to overcome the rejection of claims 1-8, 18-19, and 23-31 based upon 103(a) obviousness rejection as set forth in the last Office action because the showing is not commensurate with the scope of the claims.

MPEP 716.02(d) states:

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“Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the “objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support.” In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range”. *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980).

Also,

“To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range”. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960).

A comparison of only one example, that being silica III, defined in the instant examples is insufficient to establish criticality over the broad precipitated silica’s claimed because said silica III only defines specific properties, those of which are much more narrow when compared to what is claimed, thus said silica III is not sufficient to establish criticality over what is broadly claimed.

With reference to Applicants’ argument that “the Examiner also contends that only Example 3 has values for BET and Sears number”, it is respectfully submitted that the statement should be considered in the context it was used; in other words, as can be found in the Response to Arguments section of the previous Office Action, the Examiner was responding to Applicants’ arguments regarding the use of the disclosure of Esch et al. where applicants had only pointed out to the Examples of said reference in their arguments.

In short, the Examiner, as clearly had pointed out above and in previous Actions, has indicated that the broad disclosure of the reference makes the instant invention obvious over prior art.

Furthermore, a reference should be considered as a whole, not only based in its examples (a reference can be used for all it realistically teaches and is not limited to only the examples). In view of this, reliance on only the examples, as applicants have done in the response, is improper.

It would appear that applicants are stating that example 3 of Esch is the closest prior art, however, this is not understood because the closest prior art is the entire discloses of Esch and not only this example.

Applicants have traversed the provisional double patenting rejection.

The Examiner, respectfully, submits that the provisional double patenting rejection, as repeated above, is proper. As can be seen in 10/542,763, claims 1-9, 16-18, and 19-21 teach substantially overlapping ranges with that claimed in claims 1-8, 18-19, 21-23, and 27 of the instant application, and the ratio of BET/CTAB is obvious over the claimed ranges of BET and CTAB of application 10/542,763.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Application Publication No. 2002/0169248 to Esch et al.

US Patent No. 5,925,708 to Esch et al.

US Patent No. 6,624,230 to Luginsland

US Patent No. 6,077,466 to Türk et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegah Parvini whose telephone number is 571-272-2639. The examiner can normally be reached on Monday to Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. P./
Examiner, Art Unit 1793

/Michael A Marcheschi/
Primary Examiner, Art Unit 1793